contaminants, principally organic chemicals, provide the greatest cause for concern about upstate New York's ground water quality. Contamination from petroleum products and industrial and commercial solvents and de-greasers has caused the closing of 24 wells serving 16 upstate public water supplies. Unlike Long Island, where 61 wells have been closed because of organic chemicals, upstate New York has not yet been widely affected by well closings. However, many of the closed wells are located in primary aquifers. The group of organics most commonly found are the halogenated organic solvents: trichloroethylene, tetrachloroethylene, and 1,1,1 trichlo-roethane. Numerous instances have been recorded of localized well contamination by gasoline and petroleum product constituents as well as other hazardous material leaks or spills. Petroleum product constituents are the most commonly reported type of organic contamination of private household wells. The bulk storage of materials is considered to be the state's most serious source of ground water contamination at the present time.

Nitrate contamination has been found in some upstate locations, but it does not appear to be widespread. Chloride contamination has been found in some private household wells (salt piles appear to be the primary cause). Recent findings indicate that pesticides could be a problem in upstate ground water in some locations, but the potential scope has not yet been sufficiently investigated. Other materials (toxic metals, other organic and inorganic substances, and radiological and bacteriological contaminants) do not appear to constitute severe or widespread ground water quality problems in upstate New York.

Ground Water Management and Protection

The two state agencies with responsibilities most directly related to ground water management are the New York State Department of Environmental Conservation (DEC) and the New York State Department of Health (DOH). DEC is the state's water resource manager and is directly responsible for development of the state's ground water program. Major elements of the DEC's water program that are integral to ground water management include water resources planning, ambient water quality standards and classification of ground water, water discharge permits, and programs that provide for the development, operation, and maintenance of waste water facilities. The DEC established a system of ground water classification and standards in 1967; the most recent revision was in 1978. DEC is now developing a petroleum bulk storage program to implement legislation enacted in 1983. The regulations for the program were adopted in late 1985.

Other elements of DEC's programs that provide for ground water protection include programs to regulate landfills, programs to regulate hazardous waste generation, storage, transport, and disposal, and the pesticide regis-